

Appl. No. 09/991,501
Reply to Office Action of September 22, 2003

Amendments to the Claims:

1. (original) A multi-pole high speed generator comprising a stator and a rotor, comprising:

a shaft having an axial bore with at least one orifice at each of a first and second end thereof;

a rotor assembly mounted on the shaft, the rotor assembly including a rotor having a plurality of poles and at least one support wedge positioned between each of the poles, each of the at least one support wedge having at least one supply port in each end open to at least one axial channel in the at least one support wedge; and

an end cap mounted on the rotor at opposite ends thereof, each of the end caps having means for restraining the at least one support wedge from radially outward movement and means extending from the at least one orifice at each of the first and second ends of the shaft for circulating a cooling medium between the shaft and the at least one support wedge to cool the rotor assembly during operation of the multi-pole high speed generator.

2. (original) The multi-pole high speed generator of Claim 1, wherein the end caps define an end wall portion circumferentially surrounded by an annular flange.

3. (canceled)

4. (previously presented) The multi-pole high speed generator of Claim 1, wherein each of the end caps includes a plurality of radially circumferentially spaced openings around a peripheral raised edge of the end caps to selectively receive weights therein to balance the rotor.

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5. (currently amended) The multi-pole high speed generator of Claim 2, wherein each of the end caps include an end cap bore that is ~~substantially~~ centered in the end wall portion.

6. (previously presented) The multi-pole high speed generator of Claim 5, wherein the end cap bore and the annular flange are shrunk fit, respectively, around the shaft and over axial ends of the at least one support wedge, each end cap sealing at least an end of the rotor and restraining the at least one support wedge on the rotor.

7. (canceled)

8. (previously presented) A multi-pole high speed generator, comprising:
a shaft having an axial bore with at least one orifice extending radially from the bore at each of a first and second end thereof;

a rotor mounted on the shaft, the rotor having a plurality of poles and at least one support wedge positioned between each of the poles, the at least one support wedge having at least one inlet supply port and at least one outlet supply port open to at least one axial channel in the at least one support wedge;

a first end cap disposed over a first axial end of the at least one support wedge and having radial fluid flow galleries extending from the at least one orifice at the second end of the shaft through which fluid exits the shaft to the at least one inlet supply port in each of the at least one support wedge and a second end cap disposed over a second axial end of the at least one support wedge and having radial fluid flow galleries extending from the at least one outlet supply port in the

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at least one support wedge to the at least one orifice at the first end of the shaft through which fluid enters the shaft before exiting the rotor.

9. (currently amended) An end cap for a multi-pole high speed generator having a rotor assembly with a plurality of poles and support wedges therebetween, the end cap comprising:

a substantially central bore;

a substantially circular end wall circumferentially surrounded by an annular flange; and

paired end cap openings in the end wall with each pair at 90° angles to one another, each of the paired end cap openings includes a cooling medium feed port between the openings in each pair of paired end cap openings.

10. (original) The end cap for a multi-pole high speed generator of Claim 9, wherein the paired end cap openings are arranged circumferentially in the end wall.

11. (canceled)

12. (previously presented) The end cap for a multi-pole high speed generator of Claim 9, wherein the paired end cap openings are arranged along a radial line in the end wall and at least one of the openings in each pair serves as a cooling medium feed port.

13. (original) The end cap for a multi-pole high speed generator of Claim 9, wherein the end cap includes a raised peripheral edge having a plurality of circumferentially spaced openings provided therein for selective insertion of weights to help balance the generator.

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14. (previously presented) The end cap for a multi-pole high speed generator of Claim 9, wherein the end cap further includes a manifold at a hub location formed on an interior portion of the end cap.

15. (previously presented) The end cap for a multi-pole high speed generator of Claim 9, wherein the central bore and the annular flange are dimensioned so as to be shrunk fit, respectively, around a shaft of a rotor of the rotor assembly and over axial ends of the support wedges.

16. (previously presented) The end cap for a multi-pole high speed generator of Claim 9, wherein the manifold includes an annulus and at least one radial cooling medium gallery extending therefrom to at least one supply port formed in the support wedges.